

FIELD MAINTENANCE PRINT SET

TABLE OF CONTENTS

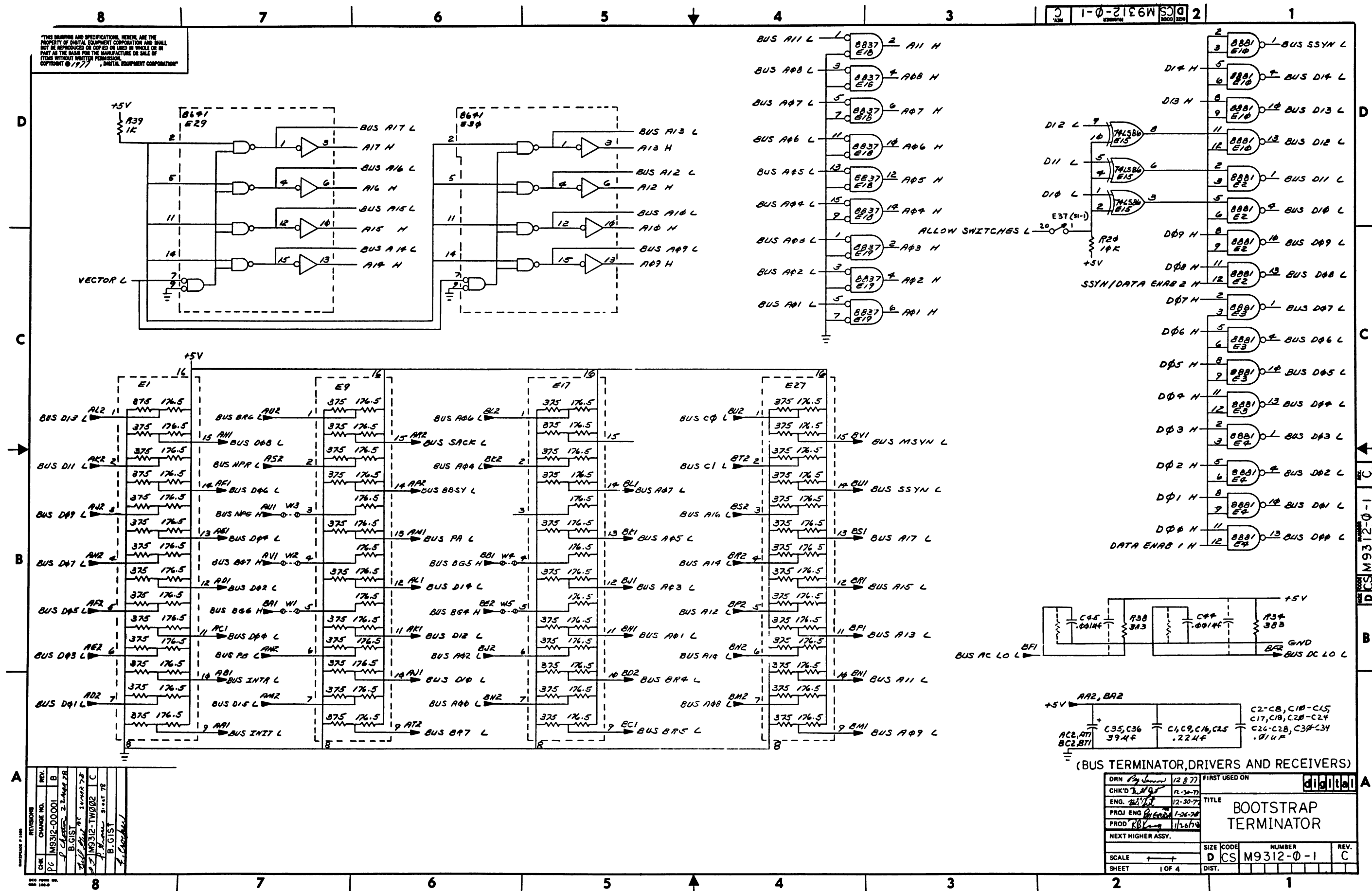
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FIELD MAINTENANCE PRINT SET (SHEET 1)
DRAWING DIRECTORY M9312 (SHEET '1)
CIRCUIT SCHEMATIC M9312 (COMPLETE)
UNIT ASSY DRAWING M9312 (COMPLETE)
PARTS LIST M9312 (COMPLETE)
SET UP AND INSTALLATION PROCEDURE (COMPLETE)
ROM LISTING DIAGNOSTIC (COMPLETE)
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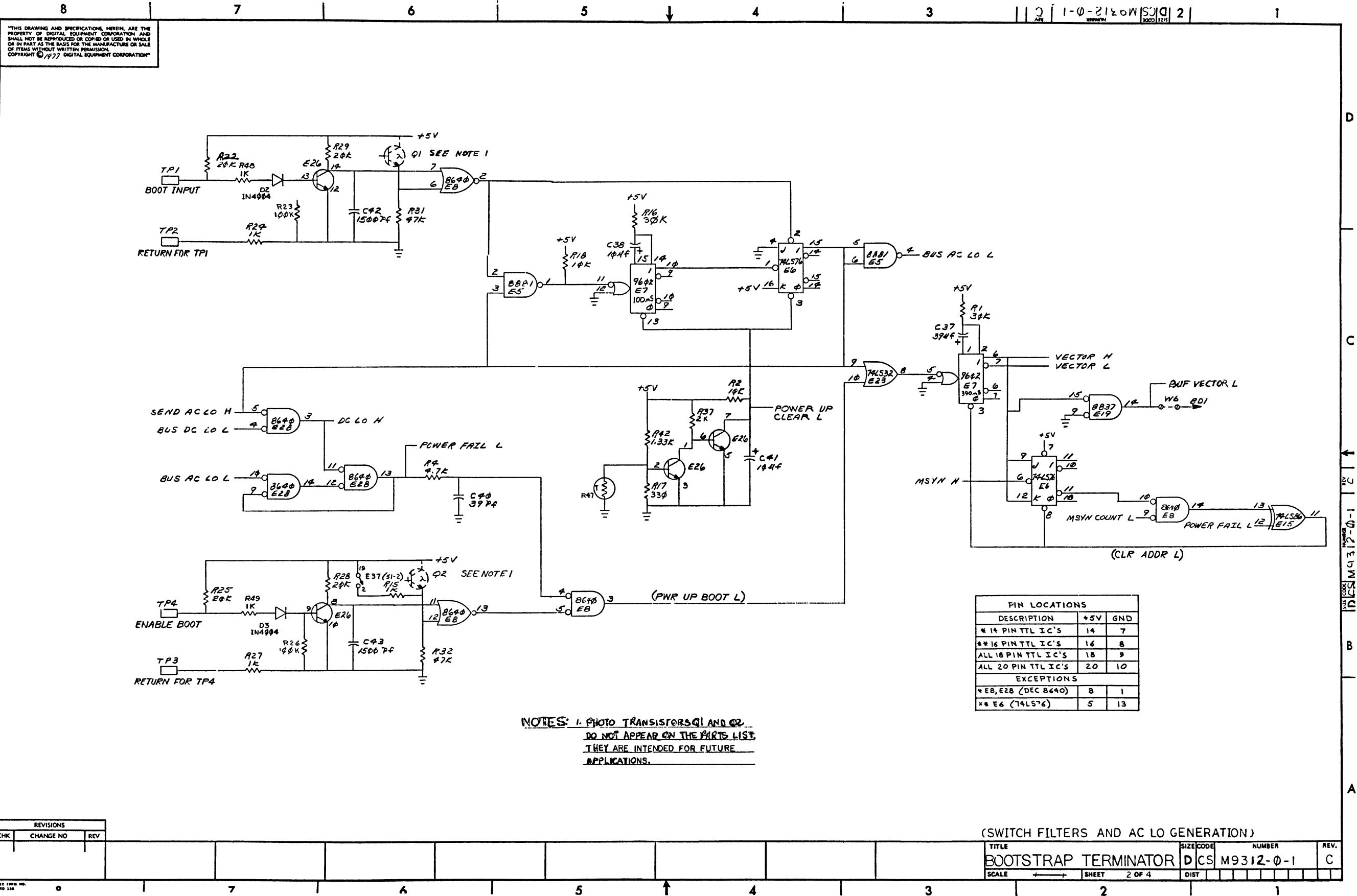
M9312
M9312-YA

Digital Equipment Corporation

| | | | | | | | | | | | | | |
|------------|-------------------|-----------------|-----------------------------|--------------------|-------------|---|------------------|-------------------|----------------------------|------------------|--|--|--|
| P/R | REVISIONS | | USED ON OPTION/MODEL | DRN. | DATE | <div style="float: right; border: 1px solid black; padding: 2px;">digital</div> TITLE: M9312 FIELD MAINTENANCE PRINT SET | | | | | | | |
| | REV. | CHG. NO. | M9312 | B. Gramm | 23 JUN 78 | | | | | | | | |
| | DATE | M9312-2 | | CHK'D | DATE | | | | | | | | |
| | ORIGINATED | | | PROJ. ENG. | DATE | | | | | | | | |
| | | | | FIELD SERV. | DATE | | | | | | | | |
| | | | | | | | | | | | | | |
| | 10 - 78 | | | SHEET I OF 1 | WC Gamm | 23 Jun 78 | SIZE B | CODE TC | NUMBER M9312-Ø-2 | REV. A | | | |
| | | | | | | DIST. | | | | | | | |

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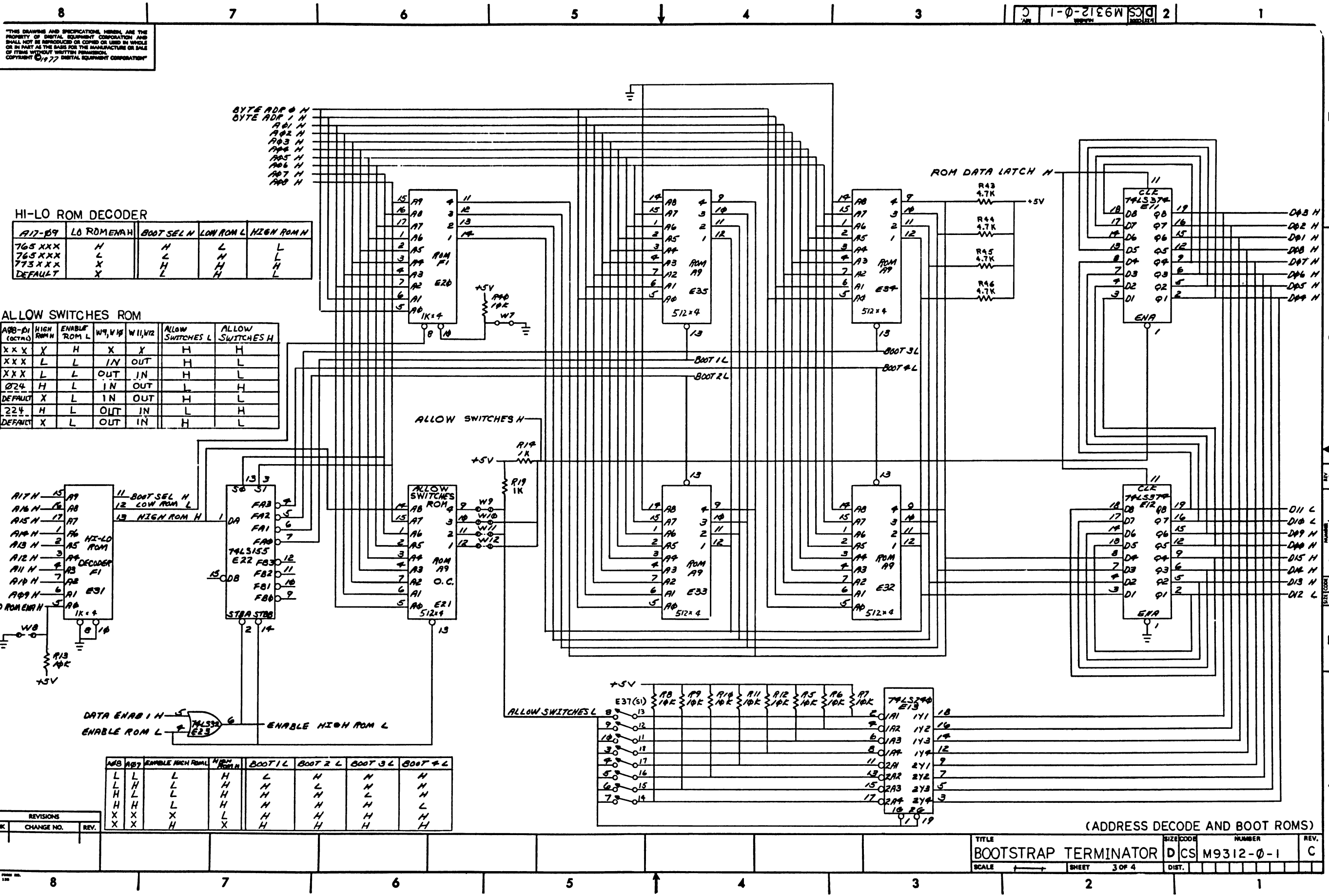




| REVISIONS | | |
|-----------|-----------|-----|
| CHK | CHANGE NO | REV |
| | | |

(SWITCH FILTERS AND AC LO GENERATION)

| TITLE | SIZE CODE | NUMBER | REV. |
|----------------------|--------------|--------------|------|
| BOOTSTRAP TERMINATOR | D | CS M9312-0-1 | C |
| SCALE | SHEET 2 OF 4 | DIST | |



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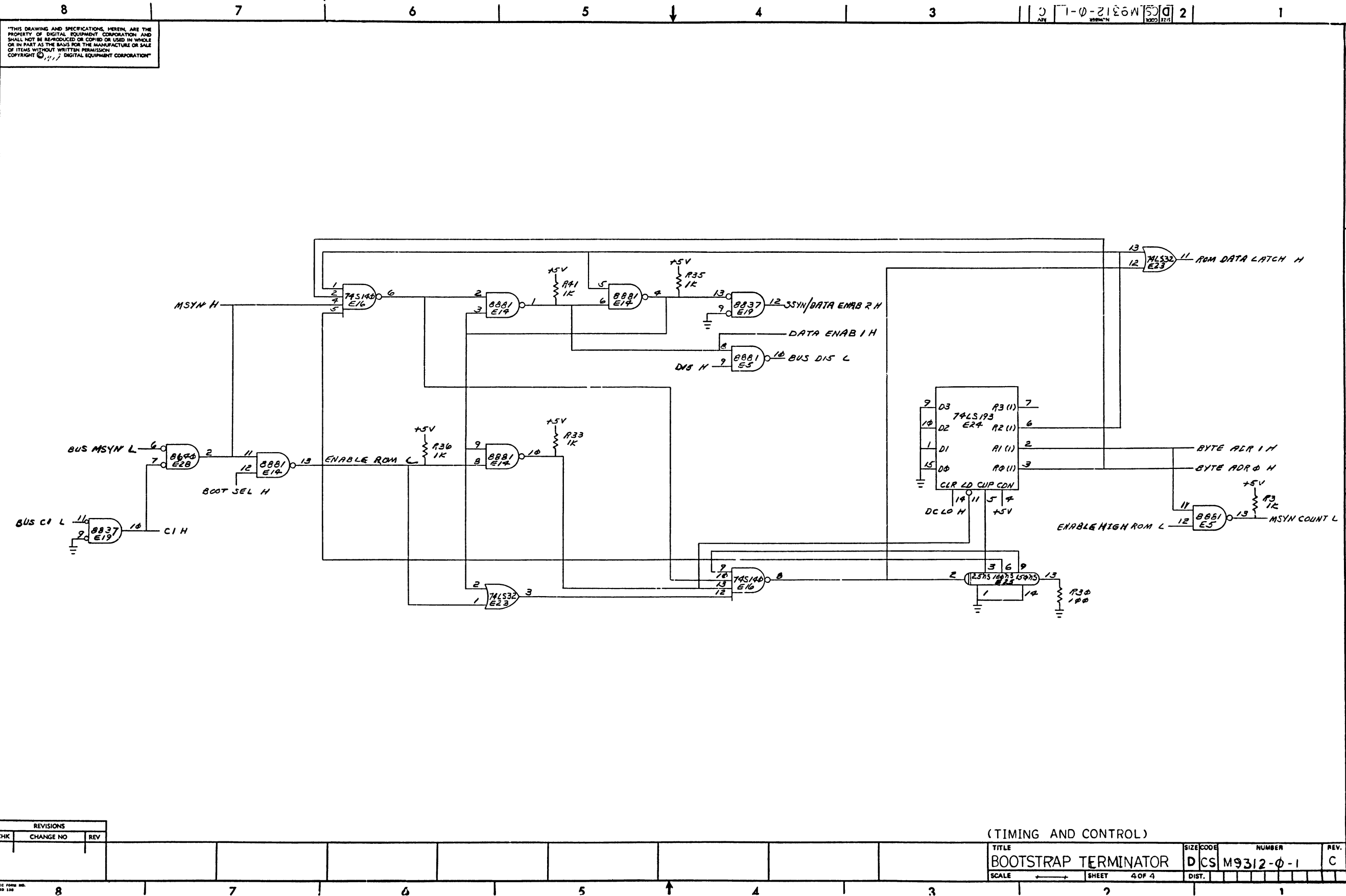
HI-LO ROM DECODER

| A17-B9 | LO ROMEN H | BOOTSEL H | LOW ROM L | HIGH ROM H |
|---------|------------|-----------|-----------|------------|
| 765 XXX | H | L | L | L |
| 765 XXX | X | L | H | L |
| 773 XXX | X | H | H | L |
| DEFAULT | X | L | H | L |

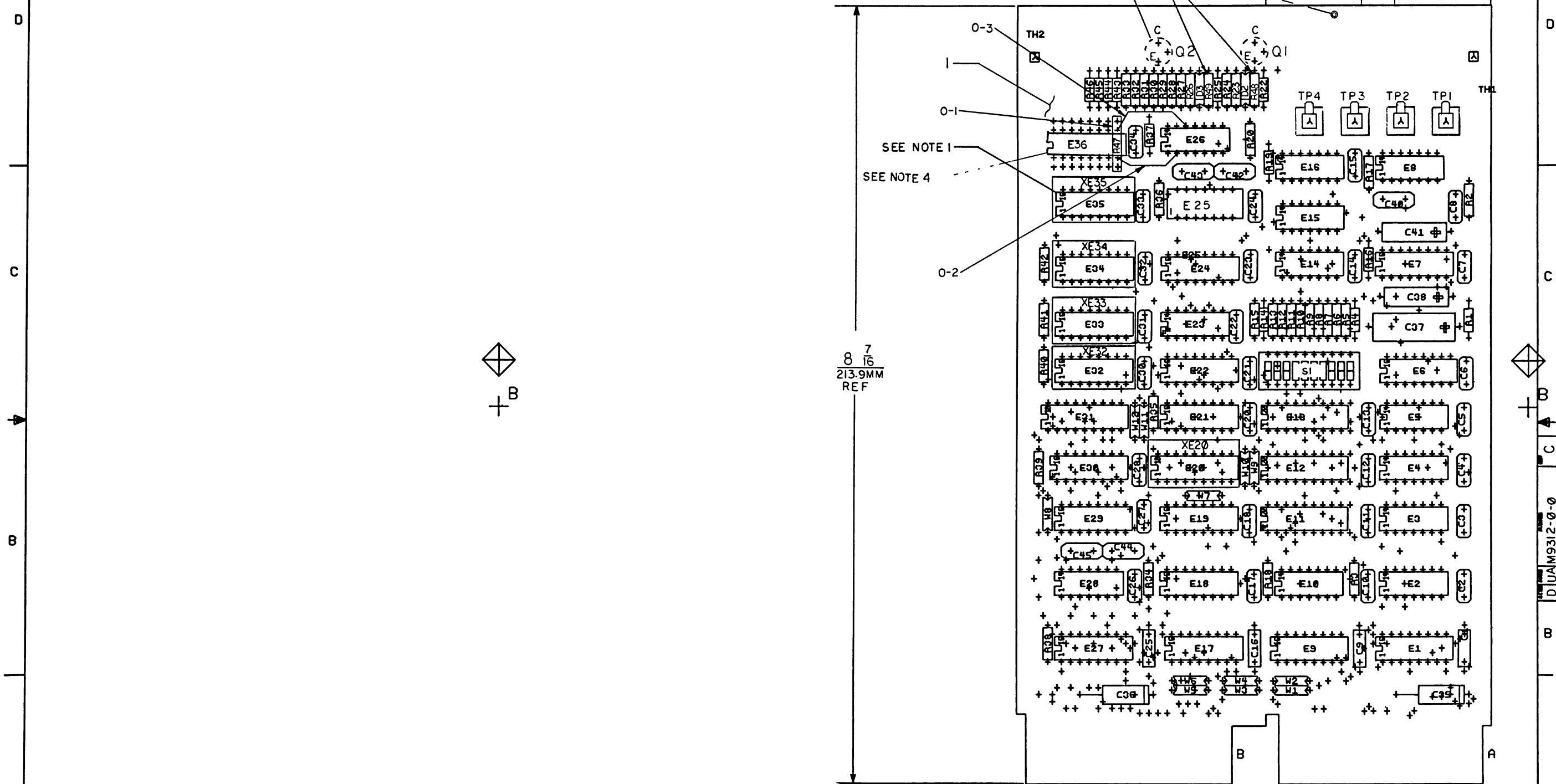
ALLOW SWITCHES ROM

| A08-B1 (OCTAL) | HIGH ROM H | ENABLE ROM L | W9, V10 | W11, V12 | ALLOW SWITCHES L | ALLOW SWITCHES H |
|----------------|------------|--------------|---------|----------|------------------|------------------|
| XXX | X | H | X | X | H | H |
| XXX | L | L | IN | OUT | H | L |
| XXX | L | L | OUT | IN | H | L |
| 024 | H | L | IN | OUT | L | H |
| DEFAULT | X | L | IN | OUT | H | L |
| 224 | H | L | OUT | IN | L | H |
| DEFAULT | X | L | OUT | IN | H | L |

(ADDRESS DECODE AND BOOT ROMS)



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NOTES: 1. IC SOCKETS TO BE USED AT LOCATIONS E20, 32, 33, 34, 35. 2. Q1 AND Q2 MOUNTING PROVISIONS FOR FUTURE APPLICATIONS. 3. M9312-YA MUST USE ETCH REV C OR LATER. 4. E36 NOT INSTALLED.

| CHANGE NO | REV | DATE | BY | CHK'D | APP'D |
|-----------|----------|--------|---------|---------|-------|
| 1 | MS9312-2 | 7-1-78 | B. GIST | E. GIST | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

| | |
|----------------------------|-----|
| ETCH REV. | CP2 |
| P.C. DESIGN DATA BASE REV. | CP2 |

| SIGNATURES | DATE | TITLE |
|----------------------------------|-----------|---------|
| DRN. <i>[Signature]</i> | 7-1-78 | digital |
| CHK'D. <i>[Signature]</i> | 7-12-78 | |
| ENG. <i>[Signature]</i> | 7-1-78 | |
| PROJ. ENG. | | |
| PROD. <i>[Signature]</i> | | |
| SCALE 2 / 1 | | |
| SHT. 1 OF 4 | | |
| NEXT HIGHER ASSY. B-DD-M9312-0-0 | | |
| SIZE CODE | NUMBER | REV |
| D UA | M9312-0-0 | C |

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L4

PA341J

L4

5013263 C-P2

5013263 C-P2

● BOOTSTRAP TERMINATOR M9312 SIDE 2 ●

● BOOTSTRAP TERMINATOR M9312 SIDE 2 ●

| REVISIONS | | |
|-----------|-----------|-----|
| CHK | CHANGE NO | REV |
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| | | |

| TITLE | | SIZE CODE | NUMBER | REV. |
|----------------------|----|-----------|-----------|------|
| BOOTSTRAP TERMINATOR | | D UA | M9312-0-0 | C |
| SCALE | ++ | SHEET | 3 OF 4 | DIST |

TW1

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REWORK INSTRUCTIONS
ECO # 2
COMPONENT ADDS SIDE 1:
0-1 THERMISTOR R47 PIN (1316312) BETWEEN
PINS E36-8 & E36-9
WIRE ADDS SIDE 1:
0-2 FROM E36-8 TO E26-2
0-3 FROM E36-9 TO E26-12
OTHER DELETFS SIDE 1:
0-4 REMOVE FROM THE P.C. BOARD
THE WORDS W13 & W14

| REVISIONS | | |
|-----------|-----------|-----|
| CHK | CHANGE NO | REV |
| | | |

| LINE | ITEM | DOCUMENT NO. | PART NO. | DESCRIPTION | QTY | REFERENCE DESIGNATORS |
|------|------|--------------|------------|---|------|--------------------------------|
| 1 | 1 | | 1000010-00 | 39.0 MMF 100V 5X200PPM DM15S (10-00 | 1 | C40 |
| 2 | 2 | | 1000043-00 | 1000.0 MMF 250V 20% Y5F DISC | 2 | C44,C45 |
| 3 | 3 | | 1000054-00 | 1500.0 MMF 250V 10% Z5P DISC | 2 | C42,C43 |
| 4 | 4 | | 1000076-00 | 39 MFD 10V 10% 150D S.TA (10-00 | 2 | C35,C36 |
| 5 | 5 | | 1001610-01 | .01 MFD 100V OR 50V Z5U DISC/800PF MIN | 28 | C2-C8,C10-C15,C17,C18,C20-C24, |
| | | | | | CONT | C26-C28,C30-C34 |
| 6 | 6 | | 1004813-00 | 10 MFD 20V 10% 150D S.TA (10-00 | 2 | C38,C41 |
| 7 | 7 | | 1005335-00 | 39 MFD 20V 10% 150D S.TA (10-00 | 1 | C37 |
| 8 | 8 | | 1010274-01 | .22 MFD 50V XZ 3C023 CER. | 4 | C1,C9,C16,C25 |
| 9 | 9 | | 1100113-00 | D 662 OS 600PCB(STABISTOR) | 2 | D2,D3 |
| 10 | 10 | | 1211164-06 | SW,DIP 1P 1A 10POS | 1 | S1 |
| 11 | 11 | | 1215006-02 | SOCKET 16PIN IC LOW PROFILE | 4 | E32-E35 |
| 12 | 12 | | 1215006-03 | SOCKET 18PIN IC LOW PROFILE | 1 | E20 |
| 13 | 13 | | 1300229-00 | 100 1/4W 5% CC (13-00 | 1 | R30 |
| 14 | 14 | | 1300365-00 | 1 K 1/4W 5% CC (13-00 | 11 | R3,R15,R23,R24,R26,R27,R33, |
| | | | | | CONT | R35,R36,R39,R41 |
| 15 | 15 | | 1300447-00 | 4.7 K 1/4W 5% CC (13-00 | 1 | R4 |
| 16 | 16 | | 1300479-00 | 10 K 1/4W 5% CC (13-00 | 15 | R5-R14,R18-R20,R40,R2 |
| 17 | 17 | | 1302177-00 | 47 K 1/4W 5% CC (13-00 | 2 | R31,R32 |
| 18 | 18 | | 1302391-00 | 20 K 1/4W 5% CC (13-00 | 5 | R22,R25,R28,R29,R37 |
| 19 | 19 | | 1302394-00 | 30 K 1/4W 5% CC (13-00 | 2 | R1,R16 |
| 20 | 20 | | 1302873-00 | 261 1/4W 1% RN55D-F 100PPM (13-00 | 1 | R17 |
| 21 | 21 | | 1305125-00 | 383 1/4W 1% RN55D-F 100PPM (13-00 | 2 | R34,R38 |
| 22 | 22 | | 1310630-00 | 1.33 K 1/4W 1% RN55D-F 100PPM (13-00 | 1 | R42 |
| 23 | 23 | | 1312628-00 | R NETWORK 14-176.5 14-375 | 2 | E1,E27 |
| 24 | 24 | | 1312628-01 | R NETWORK 14-176.5 11-375 | 2 | E9,E17 |
| 25 | 25 | | 1513265-00 | 3725 QUAD CORE DRIVER | 1 | E26 |
| 26 | 26 | | 1611243-00 | DELAY=25-250NS,10TAPS RCL#L-183 E PE#9829 | 1 | E25 |
| 27 | 27 | | 1909705-00 | DEC 8881-INAND GATE-QUAD 2IN,OPN COLL. | 6 | E2,E3,E4,E5,E10,E14 |
| 28 | 28 | | 1910546-00 | 74S140 NAND GATE-DUAL 4INPUT,BUFFER | 1 | E16 |

| REVISION HISTORY | | | VARIATIONS FOR THIS ASSY. | | |
|------------------|--------|-----|-------------------------------|-----------------|------------------------------------|
| CHK | ECO NO | REV | FIRST USED ON: M9312-00 | | |
| --- | INIT | A | DIGITAL EQUIPMENT CORPORATION | | |
| PG | 00001 | B | MAYNARD, MASSACHUSETTS | | |
| | | | MADE BY: D SIREEN | DATE: 02-DEC-77 | TITLE |
| | | | | | PARTS LIST |
| | | | CHECKED: F SMART | DATE: 02-DEC-77 | BOOTSTRAP TERMINATOR |
| | | | | | |
| | | | DSN.ENG.: BILL GIST | DATE: 29-DEC-77 | |
| | | | | | SIZE!CODE! DOCUMENT NUMBER ! REV ! |
| | | | PROD.: BOB KING | DATE: 30-DEC-77 | K ! PL ! M9312-0-0 ! B |
| | | | | | |
| | | | RESP.ENG.: RAY GRUDA | DATE: 29-DEC-77 | ASSY.NO.: D-UA-M9312-0-0 ! EDIT# ! |
| | | | | | 8 |

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| LINE | ITEM | DOCUMENT NO. | PART NO. | DESCRIPTION | QTY | REFERENCE DESIGNATORS |
|------|------|------------------|------------|--|-----|-----------------------|
| 29 | 29 | | 1910951-00 | 9602 ONE SHOT-DUAL | 1 | E7 |
| 30 | 30 | | 1911116-00 | DEC 8837 RECEIVER,BUS,HEX,UNIBUS | 2 | E18,E19 |
| 31 | 31 | | 1911469-00 | DEC 8640 RECEIVER,BUS,QUAD,UNIBUS,Q-BU | 2 | E8,E28 |
| 32 | 32 | | 1911579-00 | 8641 TRANSCEIVER,BUS,QUAD,UNIBUS | 2 | E29,E30 |
| 33 | 33 | | 1912816-00 | LS32 OR GATE-QUAD 2IN,POSITIVE | 1 | E23 |
| 34 | 34 | | 1912825-00 | LS76 FF-JK DUAL W/PRESET & CLEAR | 1 | E6 |
| 35 | 35 | | 1912829-00 | LS86 X-OR GATE-QUAD 2IN | 1 | E15 |
| 36 | 36 | | 1912846-00 | LS155 DECODER,2 OF 4(DUAL) & DEMUX | 1 | E22 |
| 37 | 37 | | 1912854-00 | LS193 COUNTER,SYNCHR,4BIT,UP/DN,BINA | 1 | E24 |
| 38 | 38 | | 1913777-00 | LS240 DRIVER,LINE,OCTAL,TRI-ST | 1 | E13 |
| 39 | 39 | | 1914214-00 | LS374 FF-D OCTAL EDGE TRIGGER | 2 | E11,E12 |
| 40 | 40 | | 23217F1-00 | F1-01 | 1 | E31 |
| 41 | 41 | | 23690A9-00 | A9-04 | 1 | E21 |
| 42 | 42 | D-MD-5013263-0-0 | 5013263-00 | ETCH BOARD FOR M9312 | 1 | |
| 43 | 43 | | 9006732-00 | EYELET, ROLLED FLANGE, .121 OD X .219 LG | 2 | |
| 44 | 44 | | 9007112-00 | TERM QUICK 1POS ADAPTER | 4 | TP1,TP2,TP3,TP4 |
| 45 | 45 | | 9008337-06 | HANDLE, FLIP CHIP, MAGENTA | 1 | |
| 46 | 46 | | 9009000-00 | EYELET, ROLLED FLANGE, .121 OD X .156 LG | 4 | |
| 47 | 47 | | 9009157-00 | ADHESIVE, PERMABOND #101 | A/R | |
| 48 | 48 | | 9009185-00 | JUMPER, WIRE, INSULATED, BLACK BAND | 3 | W7,W9,W10 |
| 49 | 49 | | 9105740-55 | WIRE(WRAP)30AWG UL1423 (91-00 | A/R | |

50 NOTE: I C SPARE LOCATIONS INCLUDE E36

| | | | | | | |
|-----------------------------------|------------------------|--------------|----------|----------|-------------------|---------|
| ! DIGITAL EQUIPMENT CORPORATION ! | ! TITLE | ! PARTS LIST | ! SIZE ! | ! CODE ! | ! DOCUMENT NUMBER | ! REV ! |
| ! MAYNARD, MASSACHUSETTS ! | ! BOOTSTRAP TERMINATOR | | ! K ! | ! PL ! | ! M9312-0-0 | ! B ! |

| | | | | | | | | | | |
|---|--------|-----|---------------------------|--|----------------------|-----------------|---|------|-----------------|---------------|
| REVISION HISTORY | | | VARIATIONS FOR THIS ASSY. | | FIRST USED ON: M9312 | | DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | | | |
| CHK | ECO NO | REV | | | MADE BY: B CRAMM | DATE: 1 AUG 78 | TITLE | | | |
| | | | | | CHECKED: N POLLITT | DATE: 17 AUG 78 | SETUP AND INSTALLATION PROCEDURE | | | |
| | | | | | DSN.ENG.: B GIST | DATE: 1 AUG 78 | SIZE | CODE | DOCUMENT NUMBER | REV |
| | | | | | PROD.: D PETERSON | DATE: 17 AUG 78 | K | SP | M9312-0-4 | B |
| | | | | | RESP.ENG.: E CROCKER | DATE: 1 AUG 78 | ASSY. #: | | | EDIT NO: 7 |
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SCOPE

THIS DOCUMENT OUTLINES THE FOLLOWING:

| | |
|--|---------|
| SECTION 1. JUMPER W1-W12 CONFIGURATION----- | PAGE 4 |
| SECTION 2. ROM INSTALLATION(BOOT ROMS, AND DIAGNOSTIC ROMS)-- | PAGE 7 |
| SECTION 3. CONNECTING FAST-ON TABS TP1-TP4.----- | PAGE 9 |
| SECTION 4. ROM CROSS-REFERENCE TABLE----- | PAGE 11 |
| SECTION 5. ROM IDENTIFICATION TABLE----- | PAGE 14 |
| SECTION 6. S1 SWITCH SETTING FOR CPU DIAGNOSTIC ROM----- | PAGE 16 |
| SECTION 7. S1 SWITCH SETTING FOR PERIPHERAL BOOT ROMS----- | PAGE 19 |
| SECTION 8. S1 SWITCH SETTING FOR COMMUNICATION BOOT ROMS----- | PAGE 33 |

USEAGE

THE M9312 IS CURRENTLY USED 4 WAYS

1. MUD MACHINE BEGINNING OF BUS TERMINATOR 11/04/34/34A
2. 11/70 BEGINNING OF BUS TERMINATOR
3. 11/60 BEGINNING OF BUS TERMINATOR
4. OTHER UNIBUS PDP 11'S BEGINNING OR END OF BUS TERMINATOR
(IF A UNIBUS REPEATER IS USED IN THE SYSTEM, THE M9312
MUST BE ON THE PROCESSOR SIDE OF THE REPEATER.)

SECTION 1.

JUMPER W1-W12 CONFIGURATION

THE NORMAL JUMPER SETUP IS SHOWN BELOW

| USEAGE | W1 | W2 | W3 | W4 | W5 | W6 | W7 | W8 | W9 | W10 | W11 | W12 |
|--|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|
| 11/04/34/34A (MUD MACHINE) M9312 IN SLOT AB2,3,4 OF PROCESSOR BACKPLANE | OUT | OUT | OUT | OUT | OUT | OUT | IN | OUT | IN | IN | OUT | OUT |
| 11/70 WITH M9312 IN SLOT EF1 OF PROCESSOR BACKPLANE (SEE NOTES 1,2,3) | IN | IN | IN | IN | IN | IN | IN | OUT | IN | IN | OUT | OUT |
| 11/60 WITH M9312 IN THE LAST AB SLOT OF THE LAST MEMORY BACKPLANE(SEE NOTE 2,3) | OUT | OUT | OUT | OUT | OUT | OUT | IN | OUT | OUT | OUT | IN | IN |
| OTHER UNIBUS CPU'S WITH M9312 IN PLACE OF M930 (OR EQUIVALENT) | IN | IN | IN | IN | IN | OUT | IN | IN | IN | IN | OUT | OUT |

NOTES :

- 1 FOR BOOT ON POWER UP THE 11/70 REQUIRES THE FOLLOWING.
 - 1.1. 7010329 BACKPLANE ECO 8 (WIRE LIST REV J OR LATER)
 - 1.2. M8130 ECO'S 1,2 AND 3 (CS REV C OR LATER)
M8130 JUMPERS SET AS FOLLOWS: W1-IN,W2-OUT,W3-IN,W4-OUT,W5-OUT,W6-OUT,W7-OUT,W8-IN,W9-OUT
 - 1.3. M8138 ECO 5 (CS REVS C1 OR E OR LATER)
 - 1.4. M9312 ECO 1 (CS REV B OR LATER)
- 2. TO BOOT ON POWER UP FROM THE MK11 MEMORY THE CABLE SHOULD BE CONNECTED TO TABS 3 AND 4 ALSO THE SWITCH S1-2 HAS TO BE OFF
- 3. IF A REMOTE INITIALIZER PANEL IS USED THE CABLES FROM THE PANEL TO THE M9312 CAN NOT HAVE ANY RESISTORS OR CAPS ON IT

EXPLANATION OF JUMPER FUNCTIONS

| | |
|--------------|--|
| -----!-----! | |
| JUMPER | ! FUNCTION PERFORMED |
| -----!-----! | |
| W1 | ! PULL UP FOR BUS BG6 H (WHEN IN) |
| -----!-----! | |
| W2 | ! PULL UP FOR BUS BG7 H (WHEN IN) |
| -----!-----! | |
| W3 | ! PULL UP FOR BUS NPG H (WHEN IN) |
| -----!-----! | |
| W4 | ! PULL UP FOR BUS BG5 H (WHEN IN) |
| -----!-----! | |
| W5 | ! PULL UP FOR BUS BG4 H (WHEN IN) |
| -----!-----! | |
| W6 | ! BUF VECTOR L (IN FOR 11/70) |
| -----!-----! | |
| W7 | ! RESERVED (ALWAYS IN) |
| -----!-----! | |
| W8 | ! LO ROM ENABLE (WHEN OUT) |
| -----!-----! | |
| W9,W10 | ! POWER UP BOOT TO 773024 (IN FOR ALL CPU'S EXCEPT 11/60)! |
| -----!-----! | |
| W11,W12 | ! POWER UP BOOT TO 773224 (IN FOR 11/60 ONLY) |
| -----!-----! | |

SECTION 2.

ROM INSTALLATION (BOOT ROM, AND DIAGNOSTIC ROMS)

ROM INSTALLATION

THERE ARE 5 SOCKETED LOCATIONS ON THE M9312. THESE ARE E20, E32, E33, E34, AND E35 (M9312 ETCH REV B AND C). THESE LOCATIONS EACH ACCEPT A ROM. ROMS USED WITH THE M9312 ARE SEPARATED INTO TWO CLASSIFICATIONS.

1. DIAGNOSTIC ROM (CPU SPECIFIC)

THIS ROM ALWAYS PLUGS INTO LOCATION "E20".
IT IS ONLY POSSIBLE TO INSTALL ONE OF THESE PER M9312.
THIS ROM CAN BE IDENTIFIED BY THE LAST 2 CHARACTERS OF THE PATTERN NUMBER THAT IS STAMPED ON THE ROM. THEY WILL ALWAYS BE "F1".

2. BOOTSTRAP ROMS

THESE ROMS ARE USED TO BOOT VARIOUS MEDIAS.
FOR M9312 ETCH REV B AND C, THEY ARE PLUGGED IN TO LOCATIONS E32, E33, E34, AND E35.
FROM THIS POINT ON IN THIS DOCUMENT E32, E33, E34, AND E35 WILL BE REFERRED TO AS ROM 4, ROM 2, ROM 3 AND ROM 1 RESPECTIVELY.
IT IS NOT REQUIRED THAT A PARTICULAR DEVICE BOOT GO INTO A PARTICULAR SOCKET BUT THE ORDER IN WHICH THE BOOT ROM SOCKETS ARE FILLED IS EXTREMELY IMPORTANT, AND FOR CONFIGURATION CONSISTENCY ROMS WILL BE INSTALLED IN ALPHABETIC ORDER BY THEIR FIRST TWO LETTER MNEMONIC. (SEE PAGE 12 AND 14) A TABLE IS PROVIDED BELOW WHICH OUTLINES THE ORDER IN WHICH THE ROMS SHOULD BE INSERTED.
NOTE THAT BOOT ROMS CAN BE DISTINGUISHED FROM DIAGNOSTIC ROMS BY THE LAST 2 CHARACTERS OF THE PATTERN NUMBER PRINTED ON THE ROM. THE BOOT ROMS ALWAYS END WITH "A9".

```

-----!
TABLE FOR ROM INSTALLATION ORDER!
-----!
ORDER OF!
-----!
INSTAL- !-----!
LATION  ! LOC.  ! (IC NUMBER) !
-----!
FIRST * ! ROM 1 !      (E35)  !
-----!
SECOND ! ROM 2 !      (E33)  !
-----!
THIRD  ! ROM 3 !      (E34)  !
-----!
FOURTH ! ROM 4 !      (E32)  !
-----!

```

* ON 11/60, IF THERE IS ONLY ONE ROM, IT MUST BE INSTALLED IN ROM 2 SOCKET TO DO A POWER-UP BOOT.

SECTION 3

FAST-ON TAB CONNECTION

THE FAST-ON TABS ARE DEFINED IN THE TABLE BELOW.

| FAST-ON ! FUNCTION PERFORMED | |
|------------------------------|--------------------------------------|
| TP1 | ! BOOT INPUT |
| TP2 | ! RETURN FOR BOOT INPUT |
| TP3 | ! RETURN FOR ENABLE BOOT ON POWER UP |
| TP4 | ! ENABLE BOOT ON POWER UP |

IT WOULD BE IMPOSSIBLE TO LIST ALL THE DIFFERENT WAYS TO CONNECT THESE POINTS, FOR A SPECIFIC APPLICATION OF THE MODULE, SYSTEM DOCUMENTATION MUST BE CONSULTED.

ONE OF THE FREQUENT APPLICATIONS OF THE M9312 IS TO REPLACE THE M9301. A TABLE IS PROVIDED BELOW THAT OUTLINING HOW THIS SUBSTITUTION CAN BE MADE WITH RESPECT TO THE FAST-ON CONNECTIONS.

| WIRE CONNECTION | | | | |
|-----------------|---------|--------|---------|-------|
| FROM | | TO | | |
| MODULE | FAST-ON | MODULE | FAST-ON | COLOR |
| M9301 | TP1 | M9312 | TP4 | BLK |
| M9301 | TP2 | M9312 | TP1 | RED |
| M9301 | TP3 | M9312 | TP3 | CLEAR |

- NOTES:
1. IF A REMOTE INITIALIZER PANEL IS USED THE CABLE FROM THE PANEL TO THE M9312 CAN NOT HAVE ANY RESISTORS OR CAPS ON IT
 2. TO BOOT ON POWER UP FROM THE MK11 MEMORY THE CABLE SHOULD BE CONNECTED TO TABS 3 AND 4 ALSO THE SWITCH S1-2 HAS TO BE OFF

SECTION 4

ROM CROSS-REFERENCE TABLES

ROM CROSS-REFERENCE TABLES

| CROSS REFERENCE ROM P/N TO ROM TABLE NUMBER | | | | | |
|---|---|---------------------|-----------|-----------------|---------------|
| PART NUMBER | FUNCTION PERFORMED BY ROM | | | | SEE TABLE |
| 23- | | | | | |
| 616F1 | DIAGNOSTIC FOR 11/60/70 ROM ID=B0 | | | | 1-1 |
| 248F1 | ASCII CONSOLE AND DIAGNOSTIC FOR 11/04/05/34/35/40/45/50/55 ROM ID=A0 | | | | 1-2 |
| ***** | | | | | |
| THE FOLLOWING ROMS ARE BOOTSTRAP ROMS | | | | | |
| ***** | | | | | |
| BOOTABLE DEVICES | | | | | |
| ----- | | | | | |
| MNEMON-IC | | FIRST DEVICE IN ROM | MNEMON-IC | | SECOND DEVICE |
| | | | | | IN ROM |
| 751A9 | DL | RL01 | NA | NA | 2-1 |
| 752A9 | DM | RK06/07 | NA | NA | 2-2 |
| 753A9 | DX | RX01 | NA | NA | 2-3 |
| 811A9 | DY | RX02 | NA | NA | 2-11 |
| 755A9 | DP | RP02/03 | DB | RP04/5/6 RM02/3 | 2-4 |
| 756A9 | DK | RK03/05 | DT | TU55/56 | 2-5 |
| 757A9 | MM | TU16/45/77/E16 | NA | NA | 2-6 |
| 758A9 | MT | TU10/E10,TS03 | NA | NA | 2-7 |
| 759A9 | DS | RS03/04 | NA | NA | 2-8 |
| 760A9 | PR | PC05 | TT | LO SPD RDR | 2-9 |
| 761A9 | CT | TU60 | NA | NA | 2-10 |
| 764A9 | MS | TS04 | NA | NA | 2-12 |
| 765A9 | DD | TU58 | NA | NA | 2-13 |
| 862A9 | XM | DMC-11 | NA | NA | 2-14 |
| 863A9 | | | | | |
| 864A9 | | | | | |

| CROSS REFERENCE DEVICE TO CONTROLER | |
|-------------------------------------|--------------|
| DEVICE | CONTROLER |
| RL01 | RL11 |
| RK06/07 | RK611 |
| RX01 | RX11 |
| RX02 | RX211 |
| RP02/03 | RP11C/E |
| RP04/05/06 RM02/03 | RH11/70 |
| RK03/05 | RK11C/D |
| TU55/56 | TC11 |
| TU16/U45/U77/E16 | RH11/70 |
| TU10/E10,TS03 | TM11/A11/B11 |
| RS03/04 | RH11/70 |
| PC05 (HI SPD RDR) | PC11/R11 |
| LO SPD RDR (ASR33) | DL11A/W |
| TU60 | TA11 |
| TS04 | TS11 |
| TU58 | DL11-W |
| MODEM | DMC-11 |
| MODEM | DU11 |
| MODEM | DUP-11 |
| | |
| | |
| | |

ROM CROSS-REFERENCE TABLES

[illegible][illegible]

SECTION 5

ROM IDENTIFICATION TABLE

SECTION 6

S1 SWITCH SETTING FOR CPU DIAGNOSTIC ROM

TABLE 1-1
ROM P/N 23-616F1

11/60/70 DIAGNOSTIC ROM

THERE ARE NO SPECIAL M9312 SWITCH SETTINGS THAT PERTAIN TO THIS ROM.
THE ONLY WAY THESE DIAGNOSTICS CAN BE EXECUTED IS BY ENTERING A BOOTSTRAP
AT AN ENTRY POINT THAT CALLS FOR DIAGNOSTICS TO BE RUN.

THIS ROM ALLOWS BOOTING VIA CONSOLE SWITCH REGISTER.
THIS CAN BE DONE AS FOLLOWS:

- 1.LOAD ADDRESS 765744
2.SET SWITCH REGISTER AS SHOWN BELOW

| | | | | | | | | | | | | | | | |
|----|----|----|----|------------|----|----|----|-------------------------------|----|----|----|----|----|----|----|
| 15 | 14 | 13 | 12 | 11 | 10 | 09 | 08 | 07 | 06 | 05 | 04 | 03 | 02 | 01 | 00 |
| NA | NA | NA | NA | | | | | | | | | | | | |
| | | | | OCTAL UNIT | | | | SWR CODE FROM BOOT ROM TABLES | | | | | | | |
| | | | | NUMBER | | | | | | | | | | | |

3. NOW START

TABLE 1-2
ROM P/N 23-248F1

ASCII CONSOLE AND DIAGNOSTIC ROM FOR USE WITH 11/04/05/34/35/40/45/50/55

THIS ROM CONTAINS CPU DIAGNOSTICS AND AN ASCII CONSOLE. TO ENTER THE ASCII CONSOLE VIA POWER-UP BOOT OR PUSH-BUTTON BOOT, THE M9312 SWITCH SETTINGS MUST BE AS SHOWN BELOW.

| -----! | | | | | | | | | | | | | |
|-------------------|--------|----------|------------------|---|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| FUNCTION TO BE | ! ROM | ! DIAG- | ! MANUAL | ! S1 SWITCH SETTINGS FOR PUSH-BUTTON OR POWER FAIL BOOT | ! | ! | ! | ! | ! | ! | ! | ! | ! |
| BOOTED | ! LOC. | ! NOSTIC | ! STARTING ADDR. | ! 1 | ! 2 | ! 3 | ! 4 | ! 5 | ! 6 | ! 7 | ! 8 | ! 9 | ! 10 |
| -----! | | | | | | | | | | | | | |
| CONSOLE EMULATOR! | E20 | ! NO | ! 165144 | ! ON | ! * | ! OFF | ! OFF | ! ON | ! ON | ! OFF | ! OFF | ! ON | ! OFF |
| CONSOLE EMULATOR! | E20 | ! YES | ! 165020 | ! ON | ! * | ! OFF | ! OFF | ! OFF | ! OFF | ! ON | ! OFF | ! OFF | ! OFF |
| -----! | | | | | | | | | | | | | |

* S1-2: WHEN ON, POWER-UP BOOT IS ENABLED; WHEN OFF, POWER-UP BOOT IS DISABLED.

THE CONSOLE EMULATOR CAN PERFORM THE FOLLOWING FUNCTIONS:

1. LOAD ADDRESS
2. EXAMINE
3. DEPOSIT
4. START
5. BOOT A DEVICE

A FULL DESCRIPTION OF THE FIRST FOUR FUNCTIONS IS GIVEN IN THE M9312 BOOTSTRAP/TERMINATOR MODULE TECHNICAL MANUAL, EK-M9312-TM-001.

TO BOOT A DEVICE VIA THE CONSOLE EMULATOR, DO THE FOLLOWING:

1. START THE CONSOLE EMULATOR
THIS CAN BE DONE BY SETTING UP THE M9312 SWITCHES AS OUTLINED IN THE TABLE ABOVE, THEN POWER FAILING THE CPU (S1-2 MUST BE ON TO DO THIS), OR PRESSING THE BOOT SWITCH (IF ONE IS AVAILABLE). ANOTHER WAY OF STARTING THE CONSOLE EMULATOR IS BY MANUALLY LOADING AND STARTING VIA CONSOLE SWITCH REGISTER (IF ONE IS AVAILABLE), USING THE MANUAL STARTING ADDR. SUPPLIED IN THE TABLE ABOVE.
2. TYPE IN THE APPROPRIATE BOOT COMMAND.
ONCE THE CONSOLE EMULATOR IS RUNNING, TYPE IN THE TWO LETTER MNEMONIC OF THE DEVICE TO BE BOOTED, FOLLOWED BY A CARRIAGE RETURN; OR TYPE IN THE TWO LETTER DEVICE MNEMONIC FOLLOWED BY AN OCTAL UNIT NUMBER, THEN A CARRIAGE RETURN. (TWO LETTER DEVICE MNEMONICS CAN BE FOUND IN THE FOLLOWING BOOT ROM TABLES.)

SECTION 7

S1 SWITCH SETTING FOR PERIPHERAL BOOT ROMS

TABLE 2-1
ROM P/N 23-751A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
- 2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG- NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|--------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| RL01 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RL01 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RL01 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RL01 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RL01 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RL01 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RL01 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RL01 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60,SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| RL01 | DL | 0-3 | 774400 |

TABLE 2-2
ROM P/N 23-752A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
- 2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| RK06/07 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK06/07 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RK06/07 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK06/07 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RK06/07 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK06/07 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RK06/07 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK06/07 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|---------|----------|------|--------|
| RK06/07 | DM | 0-7 | 777440 |

TABLE 2-3
ROM P/N 23-753A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.

2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM | DIAG- | UNIT | START | SWITCH SETTINGS S1- | | | | | | | | | | SWR |
|------------------------|-------|--------|------|--------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|------|
| | LOC. | NOSTIC | | ADDR. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | CODE |
| RX01 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX01 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RX01 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX01 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RX01 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX01 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RX01 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX01 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| RX01 | DX | 0-1 | 777170 |

TABLE 2-4
ROM P/N 23-755A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR DEFAULT BOOT OF DEVICES SUPPORTED BY THIS ROM.
- 2.THE STARTING ADDRESS FOR MANUALLY BOOTING DEVICES SUPPORTED BY THIS ROM

NOTES:

- 1.IF DIAGNOSTIC IS TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20 AND JUMPER W8 MUST BE OUT
- 2. *=CAN BE ON OR OFF. FOR S1-2 ON=BOOT ON POWER UP OFF=DO NORMAL POWER UP

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| RP02/03 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RP02/03 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RP02/03 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RP02/03 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RP02/03 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RP02/03 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RP02/03 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RP02/03 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |
| RP04/5/6 RM02/3 | ROM 1 | NO | 0 | 173050 | OFF | * | OFF | OFF | OFF | ON | OFF | ON | OFF | OFF | NA |
| RP04/5/6 RM02/3 | ROM 1 | YES | 0 | 173052 | OFF | * | OFF | OFF | OFF | ON | OFF | ON | OFF | ON | 056 |
| RP04/5/6 RM02/3 | ROM 2 | NO | 0 | 173250 | OFF | * | OFF | ON | OFF | ON | OFF | ON | OFF | OFF | NA |
| RP04/5/6 RM02/3 | ROM 2 | YES | 0 | 173252 | OFF | * | OFF | ON | OFF | ON | OFF | ON | OFF | ON | 256 |
| RP04/5/6 RM02/3 | ROM 3 | NO | 0 | 173450 | OFF | * | ON | OFF | OFF | ON | OFF | ON | OFF | OFF | NA |
| RP04/5/6 RM02/3 | ROM 3 | YES | 0 | 173452 | OFF | * | ON | OFF | OFF | ON | OFF | ON | OFF | ON | 456 |
| RP04/5/6 RM02/3 | ROM 4 | NO | 0 | 173650 | OFF | * | ON | ON | OFF | ON | OFF | ON | OFF | OFF | NA |
| RP04/5/6 RM02/3 | ROM 4 | YES | 0 | 173652 | OFF | * | ON | ON | OFF | ON | OFF | ON | OFF | ON | 656 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|-----------------|----------|------|--------|
| RP02/03 | DP | 0-7 | 776714 |
| RP04/5/6 RM02/3 | DR | 0-7 | 776700 |

TABLE 2-5
ROM P/N 23-756A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.

2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| RK03/05 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK03/05 | ROM 1 | NO | 2 | 173164 | OFF | * | OFF | OFF | ON | ON | ON | OFF | ON | OFF | NA |
| RK03/05 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RK03/05 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK03/05 | ROM 2 | NO | 2 | 173364 | OFF | * | OFF | ON | ON | ON | ON | OFF | ON | OFF | NA |
| RK03/05 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RK03/05 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK03/05 | ROM 3 | NO | 2 | 173564 | OFF | * | ON | OFF | ON | ON | ON | OFF | ON | OFF | NA |
| RK03/05 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RK03/05 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RK03/05 | ROM 4 | NO | 2 | 173764 | OFF | * | ON | ON | ON | ON | ON | OFF | ON | OFF | NA |
| RK03/05 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |
| TU55/56 | ROM 1 | NO | 0 | 173034 | OFF | * | OFF | OFF | OFF | OFF | ON | ON | ON | OFF | NA |
| TU55/56 | ROM 1 | YES | 0 | 173036 | OFF | * | OFF | OFF | OFF | OFF | ON | ON | ON | ON | 042 |
| TU55/56 | ROM 2 | NO | 0 | 173234 | OFF | * | OFF | ON | OFF | OFF | ON | ON | ON | OFF | NA |
| TU55/56 | ROM 2 | YES | 0 | 173236 | OFF | * | OFF | ON | OFF | OFF | ON | ON | ON | ON | 242 |
| TU55/56 | ROM 3 | NO | 0 | 173434 | OFF | * | ON | OFF | OFF | OFF | ON | ON | ON | OFF | NA |
| TU55/56 | ROM 3 | YES | 0 | 173436 | OFF | * | ON | OFF | OFF | OFF | ON | ON | ON | ON | 442 |
| TU55/56 | ROM 4 | NO | 0 | 173634 | OFF | * | ON | ON | OFF | OFF | ON | ON | ON | OFF | NA |
| TU55/56 | ROM 4 | YES | 0 | 173636 | OFF | * | ON | ON | OFF | OFF | ON | ON | ON | ON | 642 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED,WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|---------|----------|------|--------|
| RK03/05 | DK | 0-7 | 777404 |
| TU55/56 | DT | 0-7 | 777342 |

TABLE 2-6
ROM P/N 23-757A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
- 2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG- NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|--------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| TU16/45/77/E16 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU16/45/77/E16 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| TU16/45/77/E16 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU16/45/77/E16 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| TU16/45/77/E16 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU16/45/77/E16 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| TU16/45/77/E16 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU16/45/77/E16 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|----------------|----------|------|--------|
| TU16/45/77/E16 | MM | 0-7 | 772440 |

TABLE 2-7
ROM P/N 23-758A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
- 2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| TU10/E10,TS03 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU10/E10,TS03 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| TU10/E10,TS03 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU10/E10,TS03 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| TU10/E10,TS03 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU10/E10,TS03 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| TU10/E10,TS03 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU10/E10,TS03 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2; WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60,SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|---------------|----------|------|--------|
| TU10/E10,TS03 | MT | 0-7 | 772522 |

TABLE 2-8
ROM P/N 23-759A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
- 2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| RS03/04 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RS03/04 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RS03/04 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RS03/04 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RS03/04 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RS03/04 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RS03/04 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RS03/04 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|---------|----------|------|--------|
| RS03/04 | DS | 0-7 | 772040 |

TABLE 2-9
ROM P/N 23-760A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE,

2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE,

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT,

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| PC05 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| PC05 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| PC05 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| PC05 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| PC05 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| PC05 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| PC05 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| PC05 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |
| LO SPD RDR | ROM 1 | NO | 0 | 173034 | OFF | * | OFF | OFF | OFF | OFF | ON | ON | ON | OFF | NA |
| LO SPD RDR | ROM 1 | YES | 0 | 173036 | OFF | * | OFF | OFF | OFF | OFF | ON | ON | ON | ON | 042 |
| LO SPD RDR | ROM 2 | NO | 0 | 173234 | OFF | * | OFF | ON | OFF | OFF | ON | ON | ON | OFF | NA |
| LO SPD RDR | ROM 2 | YES | 0 | 173236 | OFF | * | OFF | ON | OFF | OFF | ON | ON | ON | ON | 242 |
| LO SPD RDR | ROM 3 | NO | 0 | 173434 | OFF | * | ON | OFF | OFF | OFF | ON | ON | ON | OFF | NA |
| LO SPD RDR | ROM 3 | YES | 0 | 173436 | OFF | * | ON | OFF | OFF | OFF | ON | ON | ON | ON | 442 |
| LO SPD RDR | ROM 4 | NO | 0 | 173634 | OFF | * | ON | ON | OFF | OFF | ON | ON | ON | OFF | NA |
| LO SPD RDR | ROM 4 | YES | 0 | 173636 | OFF | * | ON | ON | OFF | OFF | ON | ON | ON | ON | 642 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|------------|----------|------|--------|
| PC05 | PR | N/A | 777550 |
| LO SPD RDR | TT | N/A | 777560 |

TABLE 2-10
ROM P/N 23-761A9

THE TABLE BELOW CONTAINS THE FOLLOWING:
1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.
NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG- INOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|---------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| TU60 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU60 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| TU60 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU60 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| TU60 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU60 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| TU60 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU60 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED,WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| TU60 | CT | 0-1 | 777550 |

TABLE 2-11
ROM P/N 23-811A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

- 1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.
- 2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| RX02 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX02 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| RX02 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX02 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| RX02 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX02 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| RX02 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| RX02 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60,SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| RX02 | DY | 0-1 | 777170 |

TABLE 2-12
ROM P/N 23-764A9

THE TABLE BELOW CONTAINS THE FOLLOWING:
1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE,
2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.
NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| TS04 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TS04 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| TS04 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TS04 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| TS04 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TS04 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| TS04 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TS04 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| TS04 | MS | 0-3 | 772520 |

TABLE 2-13
ROM P/N 23-765A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.

2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG- NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|--------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| TU58 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU58 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| TU58 | ROM 2 | NO | 0 | 173204 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU58 | ROM 2 | YES | 0 | 173206 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |
| TU58 | ROM 3 | NO | 0 | 173404 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU58 | ROM 3 | YES | 0 | 173406 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 412 |
| TU58 | ROM 4 | NO | 0 | 173604 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| TU58 | ROM 4 | YES | 0 | 173606 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 612 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| TU58 | DD | 0-1 | 776500 |

SECTION 8

S1 SWITCH SETTING FOR COMMUNICATION BOOT ROMS

TABLE 2-14
ROM P/N 23-862A9,863A9,864A9

THE TABLE BELOW CONTAINS THE FOLLOWING:
1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE,
2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.
NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG- NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|--------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| DMC-11 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DMC-11 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| DMC-11 | ROM 1 | NO | 1 | 173030 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DMC-11 | ROM 1 | YES | 1 | 173032 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 012 |
| DMC-11 | ROM 2 | NO | 0 | 173204 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DMC-11 | ROM 2 | YES | 0 | 173206 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 212 |
| DMC-11 | ROM 2 | NO | 1 | 173230 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DMC-11 | ROM 2 | YES | 1 | 173232 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|-----------|
| DMC-11 | XM | 0-1 | !760010 ! |

TABLE 2-15
ROM P/N 23-865A9,866A9,867A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.

2.THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| DU11 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DU11 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| DU11 | ROM 1 | NO | 1 | 173030 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DU11 | ROM 1 | YES | 1 | 173032 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 012 |
| DU11 | ROM 2 | NO | 0 | 173204 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DU11 | ROM 2 | YES | 0 | 173206 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 212 |
| DU11 | ROM 2 | NO | 1 | 173230 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DU11 | ROM 2 | YES | 1 | 173232 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO.LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| DU11 | XU | 0-1 | 760010 |

TABLE 2-16
ROM P/N 23-868A9,869A9,870A9

THE TABLE BELOW CONTAINS THE FOLLOWING:

1.M9312 SWITCH SETTINGS FOR POWER-UP BOOT OR PUSH-BUTTON BOOT OF DEVICE.

2,THE START ADDRESS FOR THE CONSOLE LOAD AND START SEQUENCE.

NOTES IF DIAGNOSTIC ARE TO BE RUN,A CPU DIAGNOSTIC ROM MUST BE IN LOCATION E20, AND JUMPER W8 MUST BE OUT.

| DEVICE TO BE BOOTED | ROM LOC. | DIAG-NOSTIC | UNIT | START ADDR. | SWITCH SETTINGS S1- | | | | | | | | | | SWR CODE |
|---------------------|----------|-------------|------|-------------|---------------------|---|-----|-----|-----|-----|-----|-----|----|-----|----------|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| DUP-11 | ROM 1 | NO | 0 | 173004 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DUP-11 | ROM 1 | YES | 0 | 173006 | OFF | * | OFF | OFF | OFF | OFF | OFF | OFF | ON | ON | 012 |
| DUP-11 | ROM 1 | NO | 1 | 173030 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DUP-11 | ROM 1 | YES | 1 | 173032 | OFF | * | OFF | ON | OFF | OFF | OFF | OFF | ON | ON | 012 |
| DUP-11 | ROM 2 | NO | 0 | 173204 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DUP-11 | ROM 2 | YES | 0 | 173206 | OFF | * | ON | OFF | OFF | OFF | OFF | OFF | ON | ON | 212 |
| DUP-11 | ROM 2 | NO | 1 | 173230 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | OFF | NA |
| DUP-11 | ROM 2 | YES | 1 | 173232 | OFF | * | ON | ON | OFF | OFF | OFF | OFF | ON | ON | 212 |

* S1-2: WHEN ON,POWER-UP BOOT IS ENABLED;WHEN OFF,POWER-UP BOOT DISABLED.(MUST BE OFF FOR 11/60.SEE 11/60 DOCUMENTATION FOR POWER-UP BOOT)

WHEN BOOTING FROM THE CONSOLE EMULATOR,A DEVICE MNEMONIC AND UNIT NUMBER ARE REQUIRED. IF UNIT NUMBER IS NOT ENTERED, IT IS ASSUMED TO BE ZERO,LISTED BELOW ARE THE DEVICE MNEMONIC AND UNIT NUMBERS SUPPORTED BY THIS ROM,AND THE DEVICE CSR ADDRESS ASSUMED BY THE BOOT CODE.

| DEVICE | MNEMONIC | UNIT | CSR |
|--------|----------|------|--------|
| DUP-11 | XW | 0-1 | 760010 |

BLANK